11164321 BIOSIS NO.: 199799785466
Identification of yoghurt-spoiling yeasts with 18S rRNA-targeted oligonucleotide probes.
AUTHOR: Kosse Dagmar; Seiler Herbert; Amann Rudolf; Ludwig Wolfgang; Scherer Siegfried(a)
AUTHOR ADDRESS: (a)Inst. Mikrobiol., Forschungszentrum Milch Lebensmittel, Tech. Univ. Muenchen, Voettingerstr. 45,**Germany
JOURNAL: Systematic and Applied Microbiology 20 (3):p468-480 1997
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RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: 18S rRNA-targeted oligonucleotide probes were designed for rapid and reliable identification of yeasts involved in spoilage of dairy products. Candida parapsilosis, Candida glabrata, Clavispora lusitaniae, Debaryomyces hansenii, **Dekkera** bruxellensis, Hanseniaspora uvarum, Pichia anomala, Pichia membranaefaciens, Rhodotorula glutinis, Saccharomyces cerevisiae and Saccharomycopsis capsularis were identified by dot blot **hybridization** assays using species-specific, digoxygenin-labeled probes which were deduced from comparative analysis of highly variable regions of 18S rRNA. The eucarya-specific **probe** EUK516 gave intense signals detected by epifluorescense microscopy when **hybridized** in situ to all yeast species tested. Whole cell **hybridization** experiments revealed that the 3'-end of the target molecule is a suitable site for fluorescently labeled species-specific nucleic acid probes which detect S. cerevisiae, P. anomala, D. hansenii and D. bruxellensis in situ. Other variable regions of the 18S rRNA tested for species-specific probes apparently were not accessible to in situ **hybridization**. S. cerevisiae and P. anomala were detected in yoghurt using the fluorescently labeled probes Sce1711 and Pan1710.

11894885 BIOSIS NO.: 199900140994
Discrimination of **Brettanomyces/Dekkera** yeast isolates from wine by using various DNA finger-printing methods.
AUTHOR: Mitrakul C M; Henick-Kling T(a); Egli C M
AUTHOR ADDRESS: (a)Dep. Food Sci. Technol., Cornell Univ., New York State Exp. Station, Geneva, NY 14456**USA
JOURNAL: Food Microbiology (London) 16 (1):p3-14 Feb., 1999
ISSN: 0740-0020
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: In the recent years **Brettanomyces/Dekkera** yeasts are posing an increasingly severe quality problem in the wine industry. The early and specific detection of these yeasts is therefore needed. Here, we describe the application of genetic techniques in addition to routinely performed physiological tests to identify yeasts isolated from Cabernet Sauvignon wines characterized by wine-makers panels as having 'betty' aromas. **Brettanomyces/Dekkera** reference strains from a type culture collection were included for comparison. A RAPD-**PCR** assay was developed for species- and strain-specific discrimination of these yeasts. These data were compared to the chromosomal patterns of uncleaved, Sfi 1-digested DNA, and to the physiological behavior of the yeasts. Karyotyping gave clear distinctions, but did not allow for relatedness studies due to the lack of pattern conservation among species and strains. Conversely, RAPD-**PCR** allowed for species discrimination within the genus **Brettanomyces** and strain discrimination within the species D. bruxellensis. All wine-isolated **Brettanomyces/Dekkera** yeasts belonged to the species B. bruxellensis. Populations derived from one single clone were found in the 1992 and 1994 vintage wines, but in contrast, the 1989 yeast population differed from these two vintages.- two different strains were found instead of a homogenous population. In conclusion, we show that RAPD-**PCR** can be successfully applied to discriminate **Brettanomyces /Dekkera** yeasts on the species and strain level representing an accurate alternative to conventional physiological tests.

10/7/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12046756 BIOSIS NO.: 199900327275
A new molecular method for simultaneous identification and enumeration of **Brettanomyces** in wine.
AUTHOR: Stender H(a); Perry-O'Keefe H(a); Hyldig-Nielsen J J(a); Broomer A (a); Saracino M(a); Kurtzman C; Young B; Coull J M(a)
AUTHOR ADDRESS: (a)Boston Probes, Inc., Bedford, MA**USA
JOURNAL: Abstracts of the General Meeting of the American Society for Microbiology 99p516 1999
CONFERENCE/MEETING: 99th General Meeting of the American Society for Microbiology Chicago, Illinois, USA May 30-June 3, 1999
SPONSOR: American Society for Microbiology
ISSN: 1060-2011
RECORD TYPE: Citation

11608717 BIOSIS NO.: 199800390472
Rapid methods for detecting Saccharomyces diastaticus, a beer spoilage yeast, using the polymerase chain reaction.
AUTHOR: Yamauchi Hiromasa(a); Yamamoto Hiroshi; Shibano Yuji; Amaya Noriko; Saeki Takeshi
AUTHOR ADDRESS: (a)Inst. Fundamental Res., Technical Dev. Dep., Suntory Ltd., 1-1-1 Wakayamadai, Shimamoto-cho, Mis**Japan
JOURNAL: Journal of the American Society of Brewing Chemists 56 (2):p58-63 1998
ISSN: 0361-0470
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English; Spanish

ABSTRACT: We have devised rapid methods for detecting Saccharomyces diastaticus, a beer spoilage microorganism, using polymerase chain reaction (**PCR**). We have designed primers to detect S. diastaticus by **PCR**, paying attention to sequential differences between the glucoamylase genes of S. diastaticus and S. cerevisiae. An examination of primer reactivity showed the forward primer, SD-5A, and the reverse primer, SD-5B, to react with S. diastaticus (seven strains tested); however, they did not react with other microorganisms, including the brewing yeast used by our company, two strains of Saccharomyces spp. 10 strains of **Brettanomyces** spp., four strains of wild yeast, four strains of fungus, and 23 strains of various bacteria. The DNA extracted enzymatically from cell numbers as low as 101 worked successfully as templates for the **PCR** method. Time required to extract DNA from cells and to detect S. diastaticus was only apprxeq5 hr. The combination of the rapid microbe detection system and **PCR** led to high accuracy of analysis. For a test of beer product, these combined procedures for the detection of S. diastaticus may be useful and, even from one cell which becomes one microcolony (one to two day old colony), a test can be completed in 30 hr.

10/7/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11283160 BIOSIS NO.: 199800064492
Identification of **Brettanomyces/Dekkera** yeasts from California wines.
AUTHOR: Mitrakul C; Egli C; Henick-Kling T(a)
AUTHOR ADDRESS: (a)NYSAES, Cornell Univ., Geneva, NY**USA
JOURNAL: American Journal of Enology and Viticulture 48 (3):p390 1997
CONFERENCE/MEETING: Annual Meeting of the American Society for Enology and Viticulture San Diego, California, USA June 1997
ISSN: 0002-9254
RECORD TYPE: Citation
LANGUAGE: English

06598520 Genuine Article#: ZD676 Number of References: 34
Title: Differentiation and species identification of yeasts using **PCR**
Author(s): Lopes MD (REPRINT) ; Soden A; Martens AL; Henschke PA; Langridge P
Corporate Source: AUSTRALIAN WINE RES INST,POB 197/GLEN OSMOND/SA 5064/AUSTRALIA/ (REPRINT); UNIV ADELAIDE,WAITE AGR RES INST, DEPT PLANT SCI/GLEN OSMOND/SA 5064/AUSTRALIA/; UNIV ADELAIDE,WAITE AGR RES INST, DEPT HORT VITICULTURE OENOL/GLEN OSMOND/SA 5064/AUSTRALIA/; PLANT RES CTR,COOPERAT RES CTR VITICULTURE/URRBRAE/SA 5064/AUSTRALIA/; PETALUMA PTY LTD,/PICCADILLY/SA 5151/AUSTRALIA/
Journal: INTERNATIONAL JOURNAL OF SYSTEMATIC BACTERIOLOGY, 1998, V48, N1 (JAN), P279-286
ISSN: 0020-7713 Publication date: 19980100
Publisher: SOC GENERAL MICROBIOLOGY, MARLBOROUGH HOUSE, BASINGSTOKE RD, SPENCERS WOODS, READING, BERKS, ENGLAND RG7 1AE
Language: English Document Type: ARTICLE
Abstract: A **PCR**-based method has been developed that permits both intraspecies differentiation and species identification of yeast isolates, Oligonucleotide primers that are complementary to intron splice sites were used to produce **PCR** fingerprints that display polymorphisms between different species of indigenous wine yeasts, Although polymorphisms existed between isolates of the same species, the banding patterns shared several amplification products that allowed species identification. Importantly, the method was able to distinguish between species of the closely related Saccharomyces sense stricto yeasts, In two cases where isolates could not be positively identified there was discrepancy between the phenetic and phylogenetic species concept, The method has applications in yeast ecological studies, enabling the rapid grouping of isolates with related genomes and the investigation of population dynamics of strains of the same species.